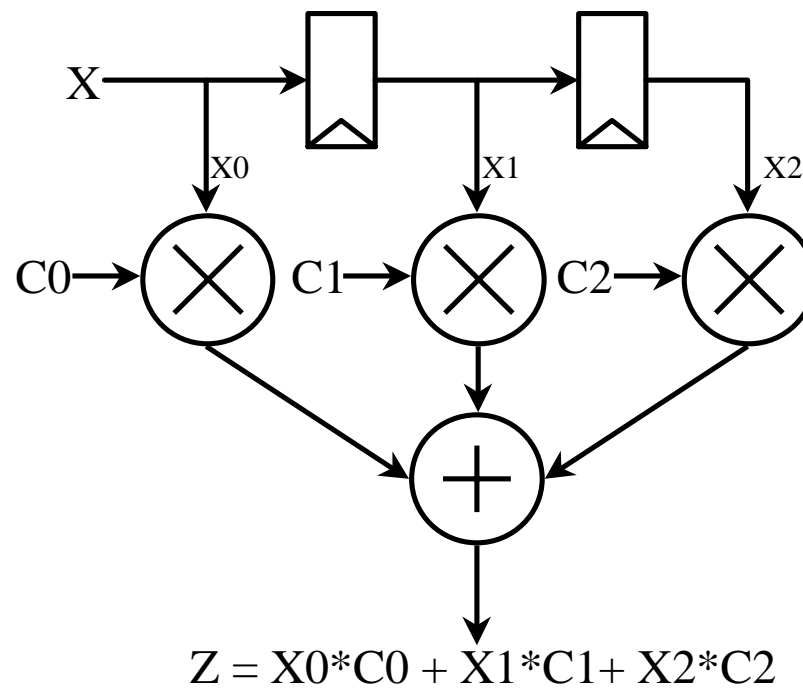


FIR Filter

■ 3 TAP FIR filter



FIR Filter

■ FIR Filter

- Works With Any Width/Format Coeff and Data
- Works With Any Number of Taps

```
function FIR (Z,X,repl(i,fnArgs()-2,",") {C{i}});  
  integer taps=fnArgs()-2;  
  input X,repl(i,taps,",") {C{i}};  
  wire XX,repl(i,taps,",") {X{i}};  
  XX = sreg(X,taps-1,repl(i,taps,",") {X{i}});  
  output Z = repl(i,taps,"+") {X{i}*C{i}};  
endfunction
```

```
X=FIR(D1,C0,256,C2);      // 3-tap, some constant coeffs  
Y=FIR(A,C0,C1,C2,C3);    // 4-taps  
Z=FIR(D1,-5,10,-5);      // 3-taps all constant coeffs  
// Note:          func(Z,A);  
// and            Z=func(A);  
// are equivalent. And fnArgs() is 2 in both cases.
```